ORIGINAL

0000115892

BEFORE THE ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission
DOCKETED
AUG 25 2010
DOCKETED BY

2010 AUG 25 P 3:51

AZ CORP COMMISSION
DOCKET CONTROL

COMMISSIONERS
KRISTIN K. MAYES - CHAIRMAN
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

IN THE MATTER OF THE APPLICATION OF TUCSON ELECTRIC POWER COMPANY FOR APPROVAL OF ITS RESIDENTIAL BILL COMPARISON PILOT PROGRAM.	DOCKET NO. E-01933A-07-0401 **SUBMITTAL IN COMPLIANCE WITH DECISION NO. 71787**

Tucson Electric Power Company ("TEP" or the "Company"), through undersigned counsel, respectfully submits for consideration by the Arizona Corporation Commission ("Commission") its proposed Home Energy Report Pilot Program ("Program") in compliance with Decision No. 71787 (July 12, 2010).

In Decision No. 71787, the Arizona Corporation Commission ordered TEP to "develop a bill comparison pilot program that will allow its customers to compare their energy usage with that of other similarly situated customers, and submit the pilot program proposal, no later than September 1, 2010, for Staff review and Commission consideration." TEP's Program, attached as Exhibit 1, will enable customers to see detailed information regarding their personal energy consumption as well as how their consumption compares to similarly situated customers.

The Program, developed with input from Navigant Consulting and The Boice Dunham Group, was modeled after similar programs being used by other utilities, including the Sacramento Municipal Utility District, Pacific Gas and Electric, AEP Ohio, and Puget Sound Energy. These programs have shown participation levels as high as 85% with energy savings ranging from 2% to 4%.

Given the success of similar programs at other utilities, TEP has high expectations for its Program. TEP issued a request for proposals ("RFP") to obtain a Program Implementation

Contractor on July 23, 2010; the issuance of contracts is anticipated by early November 2010. Once a final proposal is adopted, budgets, costs, energy savings, and cost effectiveness will be known. The numbers contained herein are estimates from the similarly situated programs at other utilities. TEP will provide updated figures to the Commission once the RFP process is complete.

The Company is anxious to begin Program implementation and expects to do so within 120 days of Commission approval. TEP hopes to deliver the Program to 25,000 customers in the first year, with expansion to 40,000 in the second year. TEP looks forward to discussing the Program with the Commission and to participating in the process of implementing the Program for the benefits of its customers.

RESPECTFULLY SUBMITTED this 25th day of August, 2010.

Tucson Electric Power Company

By _____

Michael W. Patten, Esq.
ROSHKA DEWULF & PATTEN, PLC.
One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

and

Philip J. Dion, Esq.
Melody Gilkey, Esq.
Tucson Electric Power Company
One South Church Avenue, Suite 200
Tucson, Arizona 85701

Attorneys for Tucson Electric Power Company

Original and 13 copies of the foregoing
filed this 25th day of August, 2010, with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Copy of the foregoing hand-delivered/mailed
This 25th day of August, 2010, to:

Webb Crockett
Patrick J. Black
Fennemore Craig, PC
3003 North Central Avenue, Suite 2600
Phoenix, AZ 85012-2913

Timothy M. Hogan
Arizona Center for Law in the Public Interest
202 East McDowell Road, Suite 153
Phoenix, AZ 85004

David Berry
Western Resource Advocates
P.O. Box 1064
Scottsdale, Arizona 85252-1064

Jeff Schlegel
SWEEP Arizona
1167 W. Samalayuca Dr.
Tucson, AZ 85704-3224

Daniel W. Pozefsky
Chief Counsel
Residential Utility Consumer Office
1110 West Washington, Suite 220
Phoenix, Arizona 85007

Jane Rodda, Esq.
Administrative Law Judge
Arizona Corporation Commission
400 W. Congress
Tucson, Arizona 85701

Janice Alward, Chief Counsel
Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Steve Olea
Director, Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

By Mary Appolito

Exhibit 1

Tucson Electric Power Company

Home Energy Report Program

Table of Contents

Program Concept and Description

The Home Energy Report Program ("Program") is an energy efficiency program designed to instigate behavioral changes in customers' energy consumption. The Program works by (1) making customers aware of their energy consumption; and then (2) allowing them to compare that usage to similarly situated homes. The concept is simple: once customers are able to compare their usage to similarly situated homes, sociological instincts take over and customers are induced to use less energy.

Tucson Electric Power Company's ("TEP" or "Company") Program will provide an enhanced level of interaction and cooperation between the energy provider, the energy user, and societal organizations fundamental to substantively effecting behavioral energy efficiencies. Technology-based energy efficiency achieves only a finite amount of efficiency potential. In recent Federal testimony, the American Council for an Energy Efficient Environment stated that *"...the potential behavior-related energy savings in the residential sector alone represent roughly 25 percent of current residential sector energy consumption."* The barriers to wider-spread implementation of energy efficiency are sociological not technological.

Capturing full energy efficiency potential requires behavioral changes. Because of this, energy efficiency programs need to integrate behavioral change strategies,[1] which TEP's Program does. TEP has designed a bill comparison pilot program that will allow its customers to compare their energy usage with that of other similarly situated customers. Because an implementation contractor has not been selected yet (requests for proposals were issued on July 23, 2010), the cost and savings projections provided herein are estimates based on averages gathered from similar program offerings by other utilities.

Program Objectives and Rationale

TEP's Home Energy Report Program is designed to affect: (1) habitual behaviors like turning off the lights or adjusting the thermostat; (2) purchasing behaviors such as buying efficient light bulbs and appliances; and (3) the behavior of participating in utility demand side management ("DSM") programs by preparing reports that compare a customer's energy use to that of neighbors.

The major objectives from this Program are to:

- generate significant savings for DSM portfolio objectives;
- educate and empower customers to take advantage of other DSM programs;
- develop a positive utility image;
- promote efficient building operations; and

[1] This Program is one of six behavioral initiatives that TEP will be implementing as part of its future Energy Partnership Program.

- lower energy bills for consumers.

Target Market

The Home Energy Report Program's target market is residential consumers. The Program will be offered to a select group of residential customers, phased in at four levels.

Phase 1: 25,000 Customers
A limited version of the program will be designed and a control group identified. Through this initial offering the concept will be tested.

Phase 2: Refinement
A third party will conduct an evaluation of first year Program participants as well as the control group to assess the effectiveness of the Behavior Change Program. Program results will be analyzed and Program design refined according to findings.

Phase 3: Increase Participation
Participation is planned to increase to 40,000 customers in the second full year of implementation.

Phase 4: Evaluate
An in depth evaluation strategy is a required element of the Program; an independent measurement and evaluation component will be utilized to achieve this.

Program Eligibility

Once chosen, the implementation contractor will set eligibility details. TEP expects the Program to be offered to customers based on their historical energy use. Customers who display higher than average energy use will likely be chosen for the target group. TEP expects this group to include customers who display an annual consumption of 15,000 kilowatt hours ("kWh") or more for Phase 1.

Current Baseline Conditions

Tucson Electric Power Company has approximately 370,000 residential customers in its service territory. The average annual kWh consumption for residential customers is recorded at approximately 11,000 kWh.

Favorable attitudes toward energy efficiency in general do not necessarily correlate with intentions to purchase specific energy efficient products or take particular energy efficient actions. This initiative is designed to increase awareness of energy using behaviors and instigate real and lasting behavior change to more energy efficient behaviors

The primary barriers to wider-spread energy efficiency include:

- the invisible nature of efficiencies and inefficiencies;
- the misconception by consumers that they are as efficient as they can be;
- lack of knowledge about what efficiency measures to implement, and how to prioritize them;
- lack of knowledge about where to obtain energy efficient products and services;
- misconceptions regarding cost and financial constraints;
- the mistaken belief that efficiency measures will not make a significant difference in energy use/cost;
- lack of knowledge regarding the methodologies to measure savings through behavioral initiatives; and
- questions regarding the persistence of savings from behavioral initiatives.

Products and Services

TEP will select, by competitive bid, an implementation contractor to provide Home Energy Reports. A request for proposals was issued July 23, 2010. TEP expects to select a vendor by early November 2010, and will file a supplement to this filing once all variables are known. Until final a vendor is selected, TEP has assumed that reports will be mailed bi-monthly to selected customers. Energy savings from various Home Energy Report programs offered in the residential sector can be determined by comparing changes in energy use patterns from a target group of customers receiving reports to the energy use patterns from a control group. The final method and scheduling for customer contact and method used for calculating energy savings will be determined after an implementation contractor is selected.

Delivery Strategy and Administration

The implementation contractor will be expected to deliver a turn-key program with responsibility for all aspects of customer selection, report generation, Program evaluation, energy savings calculations, customer communications, and reporting.

TEP will provide assistance on the design of the Home Energy Report for appearance, readability, content, and marketing of other available energy efficiency programs. TEP will also provide the implementation contractor the necessary customer and usage history information to generate the reports.

Program Marketing and Communication Strategy

All Home Energy Report products will be automatically mailed to the target market by the implementation contractor. Thus, no direct marketing is anticipated for this Program. TEP will, however, jointly develop the marketing message contained in the Home Energy Reports with the contractor. The Program will also be included in the integrated marketing approach developed and used for all DSM measures.

Program Implementation Schedule

The request for proposals for an implementation contractor was issued on July 23, 2010. TEP expects to have chosen a contractor by the end of November 2010. Full implementation is anticipated within 120 days of the Commission's approval of the Program.

Measurement, Evaluation and Research Plan

TEP will use an independent third-party measurement, evaluation and research contractor to evaluate the energy savings from the Home Energy Report Program. Because behavior based initiatives must provide a highly reliable evaluation protocol, TEP is proactively designing a protocol that will measure the impacts of the following.

1) The Boomerang Effect, whereby low-energy users respond to the home energy reports by increasing their energy consumption.
2) The Growth/Decay Effect, to determine whether time has a growing (energy savings increase) or a decaying (energy savings erode) effect on the Program.
3) Treatment Persistence, to determine whether energy savings persist after termination of the treatment (i.e., after the home energy reports stop).
4) The Rebound Effect, which will determine whether, after an extended period without treatment, a household may respond to renewed treatment with a savings surge.

A sampling strategy will be used to allow for evaluation of these aspects of the Home Energy Report Program.

Program Costs

The proposed budget for Program delivery for 2011 is detailed in Table 1. This data is based on averages from similar programs being offered by other utilities. TEP will update this information with a supplement after an implementation contractor is chosen if the actual data proves to be different.

Table 1. 2011 Home Energy Report Program Budget
(All figures based on estimates.)

TEP Home Energy Reports Program (2011)				
Measure	New or Exisiting Measure for 2011	Maximum Cost / Customer	Units	TOTAL
Home Energy Reports	New	$12	25,000	$300,000
Subtotal Financial Incentives				**$300,000**
Program Delivery		Cost/ particpant		
Utility Program Delivery				$39,000
Other Direct Costs (Office Expenses,Travel, Training, Software, License Fees, etc.)				$5,000
Subtotal Program Delivery				**$44,000**
Program Marketing				
Program Marketing (Internal)				$17,200
Subtotal Program Marketing				**$17,200**
Utility Program Administration				
Utility Program Administration				$26,000
Subtotal Utility Program Administration				**$26,000**
Evaluation				
Measurement, Evaluation and Research				$15,488
Subtotal Evaluation				**$15,488**
Total Incentive				**$300,000**
Total Non-Incentive				**$102,688**
TOTAL				**$402,688**
Incentives as % of Total Budget				**74%**

Estimated Energy Savings and Environmental Benefits

The total annual participation goals and per household demand and energy savings are presented in Table 2. Table 3 details demand and energy savings for 2011 at the programmatic level. Table 4 details the anticipated environmental benefits of the Program for the year 2011. These figures are based on estimates and may be updated with a supplemental filing once an implementation contractor is chosen in the event that actual data proves to be markedly different.

Table 2. Individual Energy and Demand Savings

Base Annual Home Energy Consumption (kWh)	15,000
Number of Households Participating	25,000
Program Savings (% of Sales)	2%
Non-Coincidence Savings (kW)	0.034
Household Annual Energy Savings (kWh)	300

Table 3. Program Level Energy and Demand Savings

Annual Energy Savings at Generator (MWh)	Coincident Demand Savings at Generator (MW)	Total Program Budget	Cost per Lifetime kWh Saved ($/kWh)	Cost per First Year kWh Saved ($/kWh)
10,266	0.7	$511,888	$0.05	$0.05

Table 4. Environmental Benefits in Metric Tons Reduced

Year	CO2 (Annual)	NOx (Annual)	Sox (Annual)	CO2 (Lifetime)	Nox (Lifetime)	Sox (Lifetime)
2011	9,103	12	11	9,103	12	11

Program Cost Effectiveness

The cost effectiveness of each measure and the Program as a whole was assessed using the Societal Cost ("SC") test. The cost effectiveness analysis requires estimation of:

- net demand and energy savings attributable to the Program;
- net incremental cost to the customer;
- Program administration costs; and
- the present value of Program benefits, including utility avoided costs over the life of the measures.

Table 5 provides a summary of measure and program level benefit/cost analysis results. Measure level benefit-cost results assess cost-effectiveness on the basis of incremental costs only, while program level benefit-cost results assess both incremental costs and total program delivery costs.

Table 5. Benefit-Cost Analysis Results

	Societal Cost Test BC Ratio
Home Energy Reports	1.2
Total Program	1.0

In addition to estimating the savings from each measure, this analysis relies on a range of other assumptions and financial data provided in Table .

Table 6. Other Financial Assumptions

Other Financial Assumptions	
Measure Life (yrs)	1
Program Life (yrs)	1
Non-Incentive Costs/Report	$4.11
TRC Discount Rate	8.03%
Social Discount Rate	4.00%

TEP Home Energy Report Program

Incentive Calculations
Home Energy Report (Residential)
Providing Energy Consumption Reports to Customers (Residential)

PROGRAM DATA	
Measure Life (yrs):	1
Program Life (yrs):	1
Demand AC ($/kW):	$49.44
Summer On-pk Energy AC ($/kWh):	$0.07
Summer Off-pk Energy AC ($/kWh):	$0.03
Winter On-pk Energy AC ($/kWh):	$0.04
Winter Off-pk Energy AC ($/kWh):	$0.03
Weighted Energy AC ($/kWh):	$0.04
Administrative Costs ($):	NA
Discount Rate:	8.03%
Societal Discount Rate	4.00%
NTG Ratio:	100%

RATE DATA	
Rate:	
$/kW:	$0.00
$/kWh, On-Peak:	$0.10
$/kWh, Off-Peak:	$0.10

OPERATING DATA	
On-Pk Ratio:	32%
Off-Pk Ratio:	68%
Summer Ratio:	50%
Winter Ratio:	50%
Coincidence Factor:	100%

OTHER FACTORS	
Line Loss Factor-Demand:	9.5%
Line Loss Factor-Energy:	9.5%
Capacity Reserve Factor:	0.0%
Application	Existing
Cost Basis:	Retrofit

DEMAND/ENERGY SAVINGS						INCENTIVE CALCULATIONS						CUSTOMER COST/SAVINGS				WGT.	Societal
Program Savings (% of Sales)	Customer Energy Savings (kWh/yr)	Non-Coin. Demand Savings (KW)	Coin. Demand Savings (KW)	On-pk Savings (KWh)	Off-pk Savings (KWh)	IRP PV Benefit ($)	Societal PV Benefit ($)	Recommended Incentive ($)	Recommended Incentive % PV	PV Program Cost ($)	NPV ($)	Incr. Cost ($)	Cost Savings ($)	Payback w/o Inc. (yrs)	Payback w/ Inc. (yrs)	Weighting Factors	BC Ratio
2.0%	300	0.034	0.034	96	204	13	14	12	90%	12	2	12	30	0.4	-0.01	100%	1.2

Absent meaningful program data, savings are assumed to be spread throughout the day and year following the same trend as typical daily and annual loadshape for TEP (see explaination in "Savings&Cost Calc")

File Name: HomeEnergyReport_MAS_Res_TEP_2010_08_09
Status: FINAL